# THE JOHNS HOPKINS UNIVERSITY
## SCHOOL OF MEDICINE

DEPARTMENT OF MICROBIOLOGY

725 N. WOLFE STREET
BALTIMORE, MARYLAND 21205

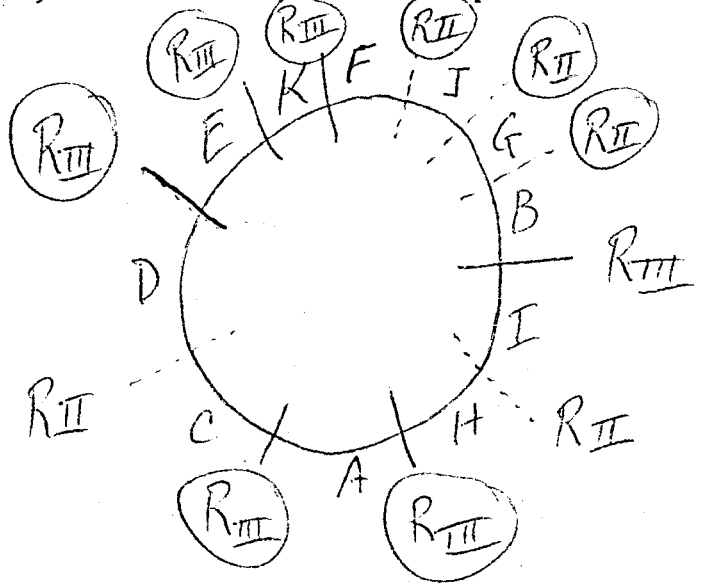

February 22, 1973

Dr. Kathleen J. Danna
Laboratorium voor
Moleculaire Biologie
K. L. Ledeganckstraat 35
Rijksuniversiteit-Gent
Gent 9000 Belgium

Dear Kathy:

Congratulations on the Stone Award. I knew they couldn't resist a Texan.

In regard to H. influenzae Endo R we have purified $R_{III}$ (A, E, K) enzyme by gradient elution from PC ( it comes off late) followed by DEAE cellulose (it runs through at 0.01 M $NaPO_4$ pH 7.4). We are still looking for $R_{II}$ (J, G) enzyme in what elutes from DEAE at about 0.05M NaCl (i.e., 4 + clot test). We have pieced the following together:




Circles indicate direct proof, others are deduced. All partials have expected MW.

$R_{II}$ (J, G) ± Ham's Endo R
$R_{III}$ (A, E, K) corresponds to Methylase III (→ NA*A)

We think this corresponds to Murray's sequence $\overset{A\downarrow AGCTT}{TTCGA\uparrow A}$ for Endo R on

lambda (?) DNA. Since Murray got 5' A's, this sequence suggests $R_{III}$ makes a staggered break at arrows.

In regard to enzymes, we now have large amounts of E. coli with RTF2 or RTF1, and I am beginning to purify $R_{II}$ and Tom Kelly will purify $R_I$. We have just gotten a new culture of H. aegyptius and I plan to grow a large batch soon.

Your work seems to be going very well. Detailed sequences should soon follow. In regard to your question about staying longer, I think you should stay another year since the work is reaching its peak, and g to Howard Green's laboratory thereafter. I wouldn't worry about the availability of jobs. With your accomplishments and background, you should not have trouble.

I have already sent the slides you asked for.

Best regard to Walter.

Sincerely,

Daniel Nathans

DN/js